

**Remarks**

Applicants respectfully request reconsideration of the application in view of the amendments presented above and the following remarks. Applicants note that an Information Disclosure Statement and a Request for Continued Examination are being filed contemporaneously with the instant paper. Applicants respectfully submit that all of the pending claims are in now in condition for allowance.

**Claim Status**

All claims currently stand rejected under § 102(b). The examiner also implied in the Office Action that all claims were non-compliant with § 112, paragraph 2.

**Amendments**

The amendments to the specification and claims correct typographical and clerical errors and do not add new matter. The basis for these corrections is apparent from a reading of the paragraphs in which they appear.

Claims 3, 4, 8, and 9 are amended to correct the antecedent basis error that was pointed out by the examiner in the Office Action.

Claim 10 is amended to correct a typographical error which caused the claim to incorrectly depend from claim 1. This error was alluded to by the examiner in the Office Action where he observed that claims 5 and 10 were identical and suggested claim 10 be cancelled. Amended claim 10 now depends from claim 6. Claim 10 is further amended to correct another typographical error that is apparent from reading the claim.

Claim 11 is amended to correct a typographical error that is apparent from reading the claim.

#### Interview Summary

Applicants thank the examiner for the courtesy he extended to Applicants' undersigned attorney and his law clerk, Stephanie Thatcher, during the personal interview that he conducted at the USPTO on March 29, 2007. During that interview, an in-depth discussion was held on the definitions of claim terms presented in the specification and the effect those definitions have on the compliance of the claims with § 112, paragraph 2 under the current law. During the interview, Applicants' attorney stated that he would file a Request for Continuing Examination with an Information Disclosure Statement and present arguments that demonstrate that the amended claims are in compliance with § 112, paragraph 2. Such an RCE is being filed concurrently with this paper and such arguments are presented below.

#### Arguments

##### 1. Compliance with § 112, Paragraph 2

The controlling authority is clear that an applicant has a right to define in the specification the terms he/she uses in his/her claims and that those definitions are to be used in construing the claims. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1370 (Fed. Cir. 2005) (*en banc*); *In re Mulligan*, Appeal No. 2004-0999, 2004 Pat. App. LEXIS 218 at \*10 - \*11 (BPAI July 22, 2004); MPEP 2111.01 (III). However, as the examiner pointed out in the interview, there is a tension between an applicant's right to be his/her own

lexicographer and the rule of law that extraneous limitations are not to be imported from the specification into the claims. The following will explain the difference between those two rules of law and demonstrate why these rules require Applicants' claims to be construed in accordance with the definitions which Applicants have set forth in their specification.

To start, the term "lexicography" means "the writing, editing, or compiling of dictionaries." Appendix 1, hereto (<http://dictionary.com/reference/browse/lexicography>, accessed March 30, 2007). Thus, when an applicant acts as a lexicographer, he/she is compiling his/her own dictionary for interpreting the application, including its claims. *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1332 (Fed. Cir. 2004) ("However, an inventor may choose to be his own lexicographer if he defines the specific terms used to describe the invention with reasonable clarity, deliberateness, and precision.") (internal quotes and cites omitted). A claim term may be defined either expressly or by implication, i.e., without an explicit statement of redefinition. *Astrazeneca AB v. Mutual Pharmaceutical Co., Inc.*, 384 F.3d 1333, 1339-1340 (Fed. Cir. 2004) ("Astrezeneca seems to suggest that lexicography requires a statement in the form 'I define \_\_\_\_ to mean \_\_\_\_,' but such rigid formalism is not required.").

As to an applicant's right to be his/her own lexicographer, the Federal Circuit, sitting en banc, stated that "our cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316 (emphasis added). The Federal Circuit then went on to say:

The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but

upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 C.F.R. § 1.75(d)(1).

*Id.* (emphasis added). The Board of Patent Appeals and Interferences affirmed its recognition of this rule of law when it stated in *Ex parte Kay*, Appeal No. 2004-1274, 2004 Pat. App. LEXIS 158 at \*7 (BPAI July 29, 2004):

In examining a patent claim, the PTO must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification." . . . Words in a claim are to be given their ordinary and accustomed meaning unless the inventor chooses to be his own lexicographer in the specification.

(Emphasis added.) Furthermore, the MPEP fully embraces this rule of law, stating: "Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim." MPEP § 2111.01 (III) (emphasis added).

The rule of law that extraneous limitations are not to be read from the specification into the claims is also well established. *E.g.*, *Phillips*, 415 F.3d at 1323; *E.I. du Pont de Nemours & Co. v. Phillips Petroleum*, 849 F.2d 1430, 1433 (Fed. Cir. 1988); *In re Prater*, 415 F.2d 1393, 1395 (CCPA 1969); *Ex parte Bowles*, 23 U.S.P.Q.2D (BNA) 1015 (BPAI 1991); MPEP § 2145 (VI.). The Federal Circuit has clarified this rule by explaining:

By "extraneous," we mean a limitation read into a claim from the specification wholly apart from any need to interpret what the patentee meant by particular words or phrases in the claim. Where a specification

does not *require* a limitation, that limitation should not be read from the specification into the claims.”

*E.I. du Pont*, 849 F.2d at 1433 (underlining added; italics in original; internal quotes and citations omitted.)

The tension between the rule that claims are to be read in light of the specification using the definitions provided by the applicant and the rule that prohibits reading extraneous limitations into the claims from the specification has often been remarked upon by the courts. For instance, the Court of Claims and Patent Appeals observed:

Nevertheless, “reading a claim in the light of the specification” to thereby interpret limitations explicitly recited in the claim, is a quite different thing from “reading limitations of the specification into a claim,” to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim. This distinction is difficult to draw and is often confused by the courts; but it is even more difficult for attorneys, attempting to work within a framework of the former not to cross over into the latter.

*Prater*, 415 F.2d at 1395 (emphasis added). In *Phillips*, the Federal Circuit opined:

Moreover, we recognize that the distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply. . . . However, the line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court’s focus remains on understanding how a person of ordinary skill would understand the claim terms.

*Phillips*, 415 F.3d at 1323 (emphasis added and citations omitted). In *E-Pass Technologies, Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003), the Federal Circuit described the tension this way:

Interpretation of descriptive statements in a patent’s written description is a difficult task, as an inherent tension exists as to whether a statement is a clear lexicographic definition or a description of a preferred embodiment.

The problem is to interpret claims “in view of the specification” without unnecessarily importing limitations from the specification into the claims.

Thus in determining whether a statement by a patentee was intended to be lexicographic, it is important to determine whether the statement was designed to define the claim term or to describe a preferred embodiment.

(Emphasis added.) *See also, Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1248-1250 (Fed. Cir. 1998) (explaining in depth the distinction between the lexicographic right and the rule against importing an extraneous limitation into the claims from the specification); *In re Bowles*, 23 U.S.P.Q. 2d (BNA) 1015 (BPAI 1991); *Redox Tech., Inc. v. Pourreau*, 73 U.S.P.Q.2d 1435, 2004 Pat. App. LEXIS 68 at \* 23-\*24 (BPAI 2004); MPEP § 2106 (II) (c).

Nonetheless, there is still much confusion surrounding the intersection of the two rules. Contributing to the confusion is the imprecise and vague language that sometimes is used in conjunction with the rule against importing extraneous limitations into the claims from the specification. Examples of this imprecision and vagueness are found in the following cases: *3M Innovative Properties Co.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003) (“While limitations in the specification must not be routinely imported into claims . . .”) (emphasis added); *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988) (“ . . . particular embodiments and examples appearing in the specification will not generally be read into the claims.”) (emphasis added); *Specialty Composites v. Cabot Corp.*, 845 F.2d 981, 987 (Fed. Cir. 1988) (“Where a specification does not require a limitation, that limitation should not be read from the specification into the claims.”) (emphasis added); *Sjolund v. Musland*, 847 F.2d 1573, 1582 (Fed. Cir. 1988) (“[T]he general principle is that limitations from the specification are not to be read

into the claims.”) (emphasis added); *Northern Telecom Ltd. v. Samsung Electronics Co., Ltd.*, 215 F.3d 1281, 1290 (Fed. Cir. 2000) (“This court has repeatedly and clearly held that it will not read unstated limitations into claim language.”) (emphasis added).

Even more problematic are the cases that flatly state the rule against importing extraneous limitations into the claims from the specification without suggesting any qualifications whatsoever. *E.g.*, *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (“Moreover, limitations are not to be read into the claims from the specification.”) (emphasis added); *Ex parte Oetiker*, 23 U.S.P.Q.2D (BNA) 1641, 1990 Pat. App. LEXIS 37 at \*20 (BPAI April 30, 1990) (“While it is true that claims are to be interpreted in light of the specification, it does not follow that limitations from the specification may be read into the claims.”) (emphasis added). The MPEP’s tendency to do likewise has certainly exacerbated the problem, especially where it cites *Van Geuns* as authority. *E.g.*, MPEP § 707.07(g) (form paragraph 7.37.08)(“Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.”) (emphasis added; citations omitted); *id.* at § 2145 (VI) (same).

Nonetheless, the imprecise and vague language in which the rule is sometimes couched does not change the fact that the rule is that it is only extraneous limitations that are not to be read into the claims from the specification. Definitions of claim terms and phrases provided by an applicant in the specification are not extraneous as they are necessary for interpreting the claims. *E.I. du Pont*, 849 F.2d at 1433. It is only by using those definitions in interpreting the claims that the inventor’s lexicography can govern determining claim meaning. *See, Phillips*, 415 F.3d at 1316.

In contrast, Applicants respectfully submit that there is no controlling authority for the requirement set forth in paragraph 2 of the Office Action that a definition for a claim term that appears in the specification ought be moved into a claim. Rather, such a requirement contradicts the controlling authority cited above that recognizes an applicant's right to define claim terms in the specification and requires such definitions to be used in construing the claims.

Seven terms and phrases are explicitly defined in the specification of the instant application with reasonable clarity so as to give a person of ordinary skill in the art notice of any departure there may be from the ordinary meanings of those terms and phrases:

- 1) "Solid free-form fabrication process" (p. 1, ll. 14-17; ¶ 0002);
- 2) "Holistically" (p. 3, ll. 11-13; ¶ 0008);
- 3) "Holistically designing the article to be made and the manufacturing process for making the article" (p. 3, ll. 13- 20; ¶0008);
- 4) "Selecting an article to be made" (p. 3, l. 22, to p. 4, l. 1; ¶ 0009);
- 5) "Designing" (p. 4, ll. 3-6; ¶ 0009);
- 6) "Capturing" (p. 4, ll. 7-9; ¶ 0009); and
- 7) "Class of articles" (p. 8, ll. 5-8; ¶0025).

(The page and line numbers refer to the specification of the application. The paragraph numbers refer to the published application, US 2006/0235556 A1.)

The specification is clear as to whether or not the examples that are set forth in relation to a definition are included within the definition or not. The only two defined terms for which examples are provided are:



a) “Holistically designing the article to be made and the manufacturing process for making the article”: This term is defined as meaning:

[T]o consider all aspects of the [sic] both the article and the manufacturing process and the interdependence of the article and the manufacturing process as well as the interdependence of each of the steps in the manufacturing process. Included among such aspects are life cycle considerations for both the article and the manufacturing process, for example, environmental impact recycling, fabrication, and energy consumption considerations.”

(Emphasis added.)

The first portion of the second sentence of this definition indicates that the taking into account the life cycle considerations of the article and the manufacturing process is a part of the activity of “holistically designing . . . .” In contrast, the last portion of the second sentence indicates that considerations of things such as “environmental impact recycling, fabrication, and energy consumption considerations,” are mere examples of things that might be evaluated as specific life cycle considerations. Thus, while the definition of “holistically designing . . . .” requires that life cycle considerations of the article and the manufacturing process be taken into account, it permits, but does not require, that things such as environmental impact, recycling, refabrication, and energy consumption considerations may be taken into account as particular life cycle considerations.

b) “Class of articles”: This term is defined as meaning:

[A] group of individual articles that share identity as to function and application, but differ only in particularities such as relative size and specific features which are not necessary to unifying application.

(Emphasis added.)

Here, the items listed after the phrase “such as” are mere examples of types of particularities which may vary among the individual articles that belong to a class. The specification then goes on to give particular examples of classes of articles, such examples, of course, not being part of the definition but rather being merely illustrative.

In view of the foregoing and the claim amendments presented herein, Applicants respectfully submit that all of the pending claims meet the requirements of 35 U.S.C. § 112, paragraph 2 and request the examiner to withdraw any concerns he had about the claims under this statute.

2. Patentability of claims over Thayer et al.

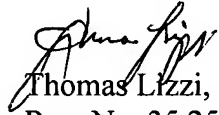
In the Office Action, the examiner rejected all claims under § 102(b) as being anticipated by Thayer et al. However, Applicants respectfully point out that although Thayer et al. teaches the use of a solid free-form fabrication process, it does not teach or suggest a step of “holistically designing the article and the manufacturing process for making the article” as required by independent claims 1 and 6. Thus, Thayer et al. does not anticipate, nor render obvious, any of the claims.

Conclusion

In view of the foregoing amendments and arguments, Applicants respectfully submit that all of the claims of the instant application are in condition for allowance. Also, Applicants believe that the claims are also patentable over all of the art cited in the accompanying IDS. Therefore, Applicants respectfully request allowance of all claims.

If the examiner has any outstanding concerns or questions, he is invited to contact Applicants' undersigned attorney.

Respectfully submitted,



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